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about each auxiliary tilt cord 14, 15 and about its associated rear vertical member 17, 19, between each adjacent pair of cross-rungs 29 or between selected pairs of cross-rungs of the rear vertical member 17, 19.

Guiding loops 21 are preferably used in the blinds of this invention. However, when no guiding loops are used, both a rear vertical member 17, 117, 217, 19, 119, 219 and its associated auxiliary tilt cord 14, 114, 214, 15, 115, 215 could be within the central passage 27 of each collar 25.

There are preferably only two or three, particularly only two, of the beads 23 and of the engaging collars 25 on each auxiliary tilt cord 14, 15 of the blind 1, but there could, if desired, be five to ten of each on each auxiliary tilt cord. Likewise, there are preferably ten or more guiding loops 21 on each rear vertical member 17, 19, depending on the length of the vertical member, but there could, if desired, be only five to ten guiding loops.

Preferably, each tilt swivel 9, 11 of the blinds 1, 101, 201 of this invention can both move the rear and front, vertical members 17, 117, 217, 18, 118, 218 and 19, 119, 219, 20, 120, 220 of one of the ladders 5, 105, 205, 7, 107, 207 in opposite vertical directions and move vertically the associated auxiliary tilt cord 14, 114, 214, 15, 115, 215 in response to movement of the cord loop 8 or tilter 108, 208. However, if desired, rotation of the winding drum 34 of each tilt swivel 9, 11 could be controlled by different means (e.g., a separate pull cord connected to the top of both auxiliary tilt cords) from the cord loop or tilter which controls rotation of the adjusting pulley 31. Such separate means would allow lower portions of the blind, when fully open, to be selectively closed by simply actuating such separate means to pull both auxiliary tilt cords upwardly.

Moreover, the normal closed position of the slats 13, 113, 213 of the blinds 1, 101, 201 could alternatively be downwardly-inclined from rear to front, and the abnormal closed position of the blind could be downwardly-inclined from front to rear.

Furthermore, a blind of this invention could have the ladders 5, 7 of the blind 1 with their regularly spaced guiding loops 21 and also have the auxiliary tilt cords 14, 15 of the blind 1, extending through the guiding loops but have the tubular elements 230 of the blind 201 only on each auxiliary tilt cord between pairs of vertically adjacent loops. In such a blind, the length L of the tubular elements would be smaller than the second pitch P2 of the loops and have a predefined relation to the first pitch P1 of the cross-rungs of the ladders.

Yet further, a blind of this invention could have a single common winding drum for the auxiliary tilt cords 14, 114, 214, 15, 115, 215, which would not be operatively connected with the tilt swivels 9, 11 of the ladders 5, 105, 205, 7, 107, 207 but would be operate by a separate manually operable cord loop.

In addition, a conventional, downwardly-extending, spacer bracket (not shown) could be mounted on the rear of the head rail 3, 103, 203 of a blind of this invention, adjacent the point of entry of each auxiliary tilt cord 14, 114, 214, 15, 115, 215 into the bottom of the head rail. The bracket could thereby serve to route the auxiliary tilt cord rearwardly of the bracket before the tilt cord enters the head rail, to keep it from rubbing against the adjacent rear vertical member 17, 117, 217, 19, 119, 219 where they both enter the head rail.

We claim:

1. A venetian blind including:

at least two vertically-extending slat-supporting ladders, each ladder comprising first and second vertical members connected by a plurality of vertically-spaced cross-rungs;

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a plurality of horizontally-arranged slats, each slat being supported on one of said cross rungs in each of said ladders and between said first and second vertical members;

an adjusting mechanism for commonly pivoting each of said slats about its longitudinal axis by moving said first and second vertical members of said ladders in vertically opposite directions;

a vertically-extending auxiliary tilt cord that is adjacent to a first vertical member of a ladder and can be moved vertically in a direction;

engaging means, on said auxiliary tilt cord and said adjacent first vertical member of said ladder, for moving said adjacent first vertical member at an intermediate location along its length vertically in said direction with vertical movement of said auxiliary tilt cord in said direction, so as to adjust the angular pivot of a section of the cross-rungs connected to said first vertical member above or below said intermediate location; said engaging means including: a guiding loop on said first vertical member; a bead fixed on said auxiliary tilt cord and vertically spaced away from said guiding loop; and an engaging collar slidably positioned on said auxiliary tilt cord between said guiding loop and said bead; said auxiliary tilt cord extending through said guiding loop; said bead being adapted to engage said engaging collar and thereafter move said engaging collar toward said guiding loop when said auxiliary tilt cord is moved vertically in said direction; and said engaging collar being adapted to engage said guiding loop when said auxiliary tilt cord is moved further vertically in said direction.

2. The venetian blind of claim 1 wherein said bead and said engaging collar are below said guiding loop and said auxiliary tilt cord can be moved upwardly to adjust the angular pivot of a section of the cross-rungs connected to said first vertical member below said intermediate location.

3. The venetian blind of claim 1 which comprises at least two, vertically extending auxiliary tilt cords, each of which is adjacent to a first vertical member of one of said ladders; and wherein said engaging means is on each of said auxiliary tilt cords and each of said adjacent first vertical members.

4. A venetian blind including:

at least two vertically-extending slat-supporting ladders, each ladder comprising first and second vertical members connected by a plurality of vertically-spaced cross-rungs;

a plurality of horizontally-arranged slats, each slat being supported on one of said cross rungs in each of said ladders and between said first and second vertical members;

an adjusting mechanism for commonly pivoting each of said cross rungs and each of said slats about its longitudinal axis by moving said first and second vertical members of said ladders in vertically opposite directions;

a vertically-extending auxiliary tilt that is adjacent to a first vertical member of a ladder and can be moved vertically in a direction;

engaging means, on said auxiliary tilt cord and said adjacent first vertical member of said ladder, for moving said adjacent first vertical member at an intermediate location along its length vertically in said direction with vertical movement of said auxiliary tilt cord in said direction, so as to adjust the angular pivot of a section of the cross-rungs connected to said first vertical member above or below said intermediate location; and

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manipulating means for moving said auxiliary tilt cord vertically in said direction which comprises a winding drum, attached to said auxiliary tilt cord, for winding said auxiliary tilt cord only after said adjusting mechanism has moved said first and second vertical members of said ladders in vertically opposite directions.

5 5. The venetian blind of claim 4 wherein said engaging means can move said auxiliary tilt cord upwardly to adjust the angular pivot of a section of the cross-rungs connected to said first vertical member below said intermediate location.

10 6. The venetian blind of claim 4 which comprises at least two, vertically-extending auxiliary tilt cords, each of which is adjacent to a first vertical member of one of said ladders; and wherein said engaging means is on each of said auxiliary tilt cords and each of said adjacent first vertical members.

15 7. The venetian blind of claim 6 wherein said manipulating means comprises at least two winding drums, each connected to said adjusting mechanism and each being adapted to wind one of said auxiliary tilt cords only after said adjusting mechanism has moved said first and second vertical members of said ladders in vertically opposite directions.

20 8. The venetian blind of claim 7 wherein each of said winding drums wind one of said auxiliary tilt cords only after said adjusting mechanism has moved said first and second vertical members of said ladders in vertically opposite directions to pivot fully all said cross-rungs in one of two opposite directions.

25 9. The venetian blind of claim 4 wherein said adjusting mechanism comprises a pulley for winding said first or second vertical member of each of said ladders.

30 10. The venetian blind of claim 7 wherein said adjusting mechanism comprises at least two pulleys for winding said first or second vertical member of each of said ladders; each pulley being connected to one of said winding drums.

35 11. The venetian blind of claim 8 wherein said adjusting mechanism comprises at least two pulleys for winding said first or second vertical member of each of said ladders; each pulley being connected to one of said winding drums.

40 12. The venetian blind of claim 4 wherein said engaging means includes: a guiding loop on said first vertical member; a bead fixed on said auxiliary tilt cord and vertically spaced away from said guiding loop; and an engaging collar slidably positioned on said auxiliary tilt cord between said guiding loop and said bead; said auxiliary tilt cord extending through said guiding loop; said bead being adapted to engage said engaging collar and thereafter move said engaging collar toward said guiding loop when said auxiliary tilt cord is moved vertically in said direction; and said engaging collar being adapted to engage said guiding loop when said auxiliary tilt cord is moved further vertically in said direction.

45 13. The venetian blind of claim 12 wherein said bead and said engaging collar are below said guiding loop and said

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auxiliary tilt cord can be moved upwardly to adjust the angular pivot of a section of the cross-rungs connected to said first vertical member below said intermediate location.

14. The venetian blind of claim 1 wherein said bead is adapted to be moved vertically through said guiding loop unobstructed, with vertical movement of said auxiliary tilt cord, if said bead has not engaged said engaging collar and is thereby prevented from moving vertically through said guiding loop.

15 15. The venetian blind of claim 14 comprising a plurality of said guiding loops that are regularly spaced along said adjacent first vertical member and have a vertical spacing, between them, which is an integer value of a vertical spacing between said cross-rungs.

16. The venetian blind of claim 15 comprising a plurality of said beads that are regularly spaced along said auxiliary tilt cord and have a vertical spacing, between them, which is an integer value of a dimension that is slightly less than the vertical spacing between said guiding loops.

20 17. The venetian blind of claim 16 comprising a plurality of said engaging collars that are regularly spaced along said auxiliary tilt cord between selected adjacent pairs of said plurality of guiding loops, whereby there is at most one engaging collar for every five cross-rungs along said adjacent first vertical member.

25 18. The venetian blind of claim 17 wherein said engaging collars are slidably positioned about said auxiliary tilt cord and said adjacent first vertical member.

30 19. The venetian blind of claim 12 wherein said bead is adapted to be moved vertically through said guiding loop unobstructed, with vertical movement of said auxiliary tilt cord, if said bead has not engaged said engaging collar and is thereby prevented from moving vertically through said guiding loop.

35 20. The venetian blind of claim 19 comprising a plurality of said guiding loops that are regularly spaced along said adjacent first vertical member and have a vertical spacing, between them, which is an integer value of a vertical spacing between said cross-rungs.

40 21. The venetian blind of claim 20 comprising a plurality of said beads that are regularly spaced along said auxiliary tilt cord and have a vertical spacing, between them, which is an integer value of a dimension that is slightly less than the vertical spacing between said guiding loops.

45 22. The venetian blind of claim 21 comprising a plurality of said engaging collars that are regularly spaced along said auxiliary tilt cord between selected adjacent pairs of said plurality of guiding loops, whereby there is at most one engaging collar for every five cross-rungs along said adjacent first vertical member.

50 23. The venetian blind of claim 22 wherein said engaging collars are slidably positioned about said auxiliary tilt cord and said adjacent first vertical member.

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